

## AMENDMENTS TO THE SPECIFICATION AND ABSTRACT

*In the specification, page 1, after the title, please insert the following heading:*

### BACKGROUND OF THE INVENTION

*In the specification, page 1, line 5, please amend the sub-heading as follows:*

#### 1. TECHNICAL FIELD OF THE INVENTION

*In the specification, page 1, line 13, please amend the sub-heading as follows:*

#### 2. DESCRIPTION OF THE RELATED BACKGROUND ART

*In the specification, page 1, paragraph [0002], please amend the paragraph as follows:*

There have been three-dimensional shape displaying devices for drawing a three-dimensional shape by using a Z buffer algorithm as a hidden surface removal system. Also, there have been techniques for increasing a speed of drawing processing of such a three-dimensional shape displaying device, for example, a technique in which each pixel contains one bit flag memory (e.g., patent document 1) and a technique which uses a degenerated Z buffer for, among a plurality of depth values of pixels, storing a depth value of a farthest pixel from a view point and a depth value of a nearest pixel from the view point (e.g., patent document 2).

*In the specification, page 4, paragraph [0013], please amend the paragraph as follows:*

As described above, the conventional three-dimensional shape drawing device described in the patent document 2 accesses the Z main buffer 206 only when the Z value of the pixel to be newly drawn is between the maximum Z value and the minimum Z value of the block

in which the pixel is positioned. As a result, the frequency of accessing the Z main buffer 206 is reduced.

[Patent Document 1] Japanese Laid-Open Patent Publication No. 62-42281

[Patent Document 2] Japanese Laid-Open Patent Publication No. 8-161526 (pages 5-7, FIGS. 1 and 4)

*In the specification, page 4, lines 17 and 18, please amend the heading as follows:*

**DISCLOSURE OF THE INVENTION**

**PROBLEMS TO BE SOLVED BY THE INVENTION**

**BRIEF SUMMARY OF THE INVENTION**

*In the specification, page 5, line 10, please amend the heading as follows:*

**SOLUTION TO THE PROBLEMS**

*In the specification, page 8, line 15, please amend the heading as follows:*

**EFFECT OF THE INVENTION**

*In the specification, pages 8-9, paragraph [0019], please amend the paragraph as follows:*

[FIG. 1]—FIG. 1 is a functional block diagram showing a configuration of a three-dimensional shape drawing device according to an embodiment of the present invention.

[FIG. 2]—FIG. 2 is a diagram schematically showing a depth value retained by a high order Z-buffer memory 102 and a low order Z-buffer memory 104.

[FIG. 3]—FIG. 3 is a flowchart showing operations of the three-dimensional shape drawing device shown in FIG. 1.

[FIG. 4]—FIG. 4 is a flowchart showing a detailed process at subroutine step S19 shown in FIG. 3.

[FIG. 5]—FIG. 5 is a block diagram showing an exemplary hardware configuration of the three-dimensional shape drawing device.

[FIG. 6]—FIG. 6 is a block diagram showing an exemplary hardware configuration of the three-dimensional shape drawing device.

[FIG. 7]—FIG. 7 is a block diagram showing a configuration of a three-dimensional shape drawing device 200 described in a patent document 2.

[FIG. 8]—FIG. 8 schematically shows a screen 214 for displaying a three-dimensional shape drawn by the three-dimensional shape drawing device of FIG. 7 and a configuration of a ZR buffer 205.

*In the specification, page 9, line 21, please amend the heading as follows:*

**DESCRIPTION OF THE REFERENCE CHARACTERS**

*In the specification, pages 9-10, paragraph [0020], please amend the paragraph as follows:*

- \_\_\_\_\_ 101 drawing section
- \_\_\_\_\_ 102 high order Z-buffer memory
- \_\_\_\_\_ 103 image memory
- \_\_\_\_\_ 104 low order Z-buffer memory
- \_\_\_\_\_ 105 high order bit comparing section

- \_\_\_\_\_ 106 low order bit comparing section
- \_\_\_\_\_ 107 high order Z-buffer clearing section
- \_\_\_\_\_ 108 low order Z-buffer clearing section]
- \_\_\_\_\_ 110 depth value calculation section
- \_\_\_\_\_ 111 brightness and material calculation section
- \_\_\_\_\_ 121 CPU
- \_\_\_\_\_ 122 high speed graphics memory
- \_\_\_\_\_ 123 low speed graphics memory
- \_\_\_\_\_ 201 image composing section
- \_\_\_\_\_ 202 drawing processing section
- \_\_\_\_\_ 203 frame buffer
- \_\_\_\_\_ 204 palette circuit
- \_\_\_\_\_ 205 ZR buffer
- \_\_\_\_\_ 206 Z main buffer
- \_\_\_\_\_ 207 display section
- \_\_\_\_\_ 208 image supply section
- \_\_\_\_\_ 209 pixel drawing section
- \_\_\_\_\_ 210 drawing determination section
- \_\_\_\_\_ 211 maximum Z value within a block
- \_\_\_\_\_ 212 minimum Z value within a block
- \_\_\_\_\_ 213 example of a block resulting from dividing a screen
- \_\_\_\_\_ 214 screen
- \_\_\_\_\_ 401, 402 figures

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403 pixel comprising a figure

*In the specification, page 11, line 2, please amend the heading as follows:*

**BEST MODE FOR CARRYING OUT DETAILED DESCRIPTION OF THE INVENTION**

*In the specification, page 30, line 2, please amend the heading as follows:*

**INDUSTRIAL APPLICABILITY**